To further understand this opportunity, this research sought to identify key IC practices that would be impacted by MDx testing and could support improved HAI outcomes. **METHODS:** Telephone-based primary research was conducted with 34 hospital quality and IC stakeholders across the US and UK to understand the impact of HAIs, current IC practices, quality metrics, outcomes and opportunities for MDx. Desk research was carried out to further investigate hospital IC strategies and reporting metrics. **RESULTS:** Hospitals have implemented a variety of strategies aimed at reducing and preventing the incidence of HAIs. Hospitals assess the success of their IC strategies by benchmarking their infection rates against national or regional reports and measuring compliance with certain IC protocols. There are various IC practices that could be impacted by MDx testing such as patient isolation and timely administration of targeted antibiotic therapy; however, metrics associated with these protocols are generally not reported. **CONCLUSIONS:** Primary and secondary research findings suggest that compliance with IC protocols is critical to improving HAI outcomes. Expanding hospital quality reporting metrics to include factors impacted by MDx could support value-based contracting efforts by associating testing with improved IC practices, and will ultimately support improved HAI outcomes.

PMD134

BUDGET IMPACT ANALYSIS OF BIOABSORBABLE DRUG-ELUTING SINUS IMPLANTS FOR ENDOSCOPIC SINUS SURGERY

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OBJECTIVES: Bioabsorbable drug-eluting sinus implants (BDESI) inserted during endoscopic sinus surgery (ESS) have been shown to improve post-operative outcomes in the management of refractory chronic rhinosinusitis (CRS) through reduced post-operative scarring, inflammation, polyposis and middle turbinate lateralization. This study estimated the incremental budgetary impact of incorporating BDESI in CRS patients undergoing ESS. **METHODS:** A budget impact model (following ISPOR's Good Practice Report) was developed from the perspective of the United States payor/self-insured employer. The model was created to be dynamic and adaptable to different countries. Estimates of the prevalence of CRS; rates of ESS; and effectiveness outcomes; along with direct and indirect costs from CRS were obtained from a best-evidence systematic review of the published literature. A total population of 1.5 million members was used for the analysis. All cost data obtained from the published literature were adjusted to April 2015 US dollars using the medical care component of the Consumer Price Index. The comparator groups were ESS with BDESI compared to the current clinical peri-/ post-operative care. Primary outcome was the incremental budget impact reported using per-member-per-month (PMPM) costs. Scenario-based, probabilistic, and one-way sensitivity analyses were performed. **RESULTS:** For a US payor/self-insured employer health plan of 1.5 million members, the incremental PMPM impact of BDESI was estimated to range from -$0.009 to $0.09. The results varied based on the parameters included in the individual scenario. Sensitivity analyses revealed these findings to be robust to specified parameter value ranges. **CONCLUSIONS:** Previously published studies have documented the clinical benefits of BDESI. This study has demonstrated the use of BDESI during ESS procedures has negligible impact on the healthcare budget. Additional research is necessary to determine the budget impact for different countries based on the same factors described within this analysis.

PMD135

RE-USE OF INSULIN SYRINGE NEEDLES AND ITS EXTRA DISEASE BURDEN FOR DIABETIC PATIENTS IN BEIJING

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OBJECTIVES: To investigate the situation of disposable insulin syringe needles re-use in the diabetic patients in Beijing and the safety problems due to re-use as well as the extra disease burden. **METHODS:** Use the semi-constructed questionnaire to investigate how the insulin injection needles were re-used and its disease burden on diabetic patients who had been treated by insulin injection for at least half a year in 21 hospitals in Beijing. **RESULTS:** 45.25% of the insulin syringe needles were obtained from the pharmacies outside hospitals and the average price was 2.76 RMB per piece. Only less than 2% of the diabetics use new disposable needle per injection and 30.52% of them only changed their needles once per week. The main cause of 84.53% of the diabetics was cost saving. More than half of the surveyed diabetics got needle-injection-related hurts such as Lipohypertrophy and skin infection. 61.98% got hypoglycemia symptoms in the last 3 months. It was estimated that the extra disease burden resulted from the safety problems of insulin syringe needles re-use was 458.74 RMB per patient per year. **CONCLUSIONS:** At first health education should be enhanced on how to use the insulin syringe needles correctly and take it into consideration of bring the insulin syringe needles into insurance reimbursement list at appropriate time to alleviate the economic burden of the diabetics.

PMD136

COST-EFFECTIVENESS OF LOCAL INSUFFLATION OF WARM HUMIDIFIED CO2 DURING OPEN AND LAPAROSCOPIC COLORECTAL SURGERY

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OBJECTIVES: To determine the cost-effectiveness of local insufflation (via a humidifier) of warm humidified CO2 (WH-CO2) compared with standard care in patients undergoing open or laparoscopic colorectal surgery. **METHODS:** A decision-analytic model was developed to estimate the costs and quality-adjusted life-years (QALYs) associated with open and laparoscopic colorectal surgery from a UK NHS perspective. WH-CO2 was compared with no insufflation in open surgery patients and with unheated CO2 (U-CO2) in laparoscopic patients. Efficacy data were derived from a published randomised controlled trial reporting on the proportion of patients with hypothermia, a US database analysis of hypothermia patients for open surgery, and from an unpublished UK NHS before and after study of laparoscopic surgery patients. Other parameter inputs were obtained from published literature. Deterministic and probabilistic sensitivity analyses were conducted to assess the robustness of results. Scenario analyses were undertaken to explore structural uncertainty within the model. **RESULTS:** The use of WH-CO2 dominated standard care, as it was both cost saving and generated greater QALYs, for both open and laparoscopic surgery patients over a one year time horizon. Results varied by the number of patients undergoing surgery per humidifier per year. Based on 250 patients using the humidifier each year over a five year lifetime of the humidifier, WH-CO2 dominated no insufflation in open surgery patients in 71% of model iterations and dominated U-CO2 in laparoscopic surgery in 98% of model iterations. WH-CO2 remained the cost-effective treatment option at a willingness-to-pay threshold of £20,000 per QALY throughout all scenario and sensitivity analyses considered, provided 10 or more patients used each humidifier over its life span. **CONCLUSIONS:** The analyses conducted suggest that based upon the currently available clinical evidence, WH-CO2 is a cost-effective use of resources for patients undergoing either open or laparoscopic colorectal surgery within the UK NHS.

PMD137

ECONOMIC ANALYSIS OF EVARREST® SEALANT MATRIX COMPARED WITH STANDARD OF CARE IN SEVERE SOFT TISSUE SURGICAL BLEEDING: A UNITED KINGDOM HOSPITAL PERSPECTIVE

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OBJECTIVES: Although several hemostats are available, drawbacks include limitations with efficacy and ease-of-use. Despite their use, uncontrolled bleeding still remains common and is associated with important clinical and economic burden. A study was conducted to estimate the economic impact of a novel fibrin sealant matrix (EVARREST®) versus standard of care (SoC) in problematic severe soft tissue surgical bleeding in the United Kingdom (UK). **METHODS:** An economic model quantified 30-day cost impact of EVARREST® from a UK hospital perspective. Severe soft tissue bleeding trial resources included quantity of initial treatment, re-treatment, surgery time, transfusion risk, amount transfused, and hospitalization (ICU and ward stay). SoC was composed of Surgicel® (88%) and conventional methods (e.g., manual compression). The surgical analysis included resources clinically related to the significant hemostasis benefit of EVARREST®(i.e., initial and re-treatment, operating time, transfusion). A hospital analysis included all resources collected. Published data on UK costs were applied to resource use. A subgroup analysis was conducted for patients meeting coagulopathic criteria based on abnormal values for at least one of the trial coagulation parameters collected. **RESULTS:** The surgical base-case analysis predicted that EVARREST® cost was offset by averted resource use with per patient cost impact of £464 (sensitivity range: -£422 to £1,351) vs. SoC. The hospital analysis predicts further resource reduction with EVARREST® leading to cost-savings of £1,006 per patient (sensitivity range: -£2,546 to £534). In coagulopathic patients, the results dramatically improved, with the surgical and hospital analysis both showing cost-savings of £2,526 and £5,720 per patient, with EVARREST®vs. SoC respectively. **CONCLUSIONS:** In problematic bleeding situations, EVARREST® may result in important cost savings for hospitals, in addition to meeting an important unmet need. This analysis suggests results may depend on bleeding type, with increased benefit in challenging (i.e., coagulopathic) bleeding patients. Further study is needed to confirm findings.

PMD138

MEDICAL DEVICES: WHY DO SOME PAY MORE THAN OTHERS DO? ANALYSIS OF PRICE VARIATION IN FRENCH PUBLIC HOSPITAL IN 2013

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OBJECTIVES: The aim of this benchmarking study is to provide a detailed analysis of medical devices (MD) price and to identity what drove price dispersion. **METHODS:** A large panel of MD level price data was collected in 3 French public healthcare institutions and 10 centralized purchasing groups (representing 37% of french public hospitals). MD were selected according to the Pareto law (20% of the MD represent 80% of the expenditure) and expert opinion to ensure that each MD had sufficiently large demand. Several factors were considered such as volume purchased, affiliation to a purchasing group, procurement procedure and contract start date. **RESULTS:** Finally, 18 MD were retained following up on the provided answers (5 elastic bandages, 2 implants, 8 common MD and 3 captive MD). In terms of pricing, results between hospitals being close for similar quantifies and none can be defined as the benchmark leader. Rebates are a common mechanism and the level of discount depends on the MD considered and type of funding (activity based or additional payments). Open public tenders are the most commonly procurement procedure used, whereas negotiated procedures are more efficient for captive MD. There is practically no relationship between volume purchased and purchased prices. MD price can change over time and the relevance of the contract start date is confirmed: older the contract is, cheaper is the price for some MD, or on the contrary for others. **CONCLUSIONS:** There is no connection between catalogue prices and purchased prices especially for MD paid by activity based payment (discount rates can reach 50% to 90%). As the volume effect has no evident impact on MD discounts, the advantage of joining a centralized purchasing group has not been confirmed. The crucial factors are mainly the MD considered, the contract start date and the procurement procedure.